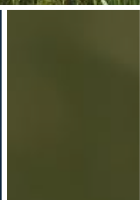




# 2013 - 2017 North Dakota State Comprehensive Outdoor Recreation Plan WETLANDS PRIORITIES





# 2013 - 2017 North Dakota State Comprehensive Outdoor Recreation Plan

## WETLANDS PRIORITIES

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*The mission of the North Dakota Parks and Recreation Department is to provide and enhance outdoor recreation opportunities through diverse parks and programs that conserve the state's natural diversity.*

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## Wetlands Priorities

This *Wetlands Priorities* publication is one component of the *2013-2017 North Dakota State Comprehensive Outdoor Recreation Plan* (SCORP) prepared by the North Dakota Parks and Recreation Department. It was financed in part by a planning grant from the National Park Service, U.S. Department of the Interior, under the provisions of the Land and Water Conservation Fund (LWCF) Act of 1965 (PL 88-578, as amended).

The U.S. Congress enacted the Emergency Wetlands Resources Act of 1986 to protect and promote the conservation of the nation's wetlands. The act amends the LWCF Act to require each state's SCORP to specifically address wetlands and to:

- (1) Be consistent with the National Wetlands Priority Conservation Plan, prepared by the U.S. Fish and Wildlife Service;
- (2) Provide evidence of consultation with the state agency responsible for fish and wildlife resources (North Dakota Game and Fish Department);
- (3) Contain a listing of those wetland types which should receive priority for acquisition; and
- (4) Consider outdoor recreation opportunities associated with its wetlands resources for meeting the state's public outdoor recreation needs.<sup>1</sup>

1. National Park Service, Land and Water Conservation Fund State Assistance Program, Federal Financial Assistance Manual, October 1, 2008.



# North Dakota Wetlands

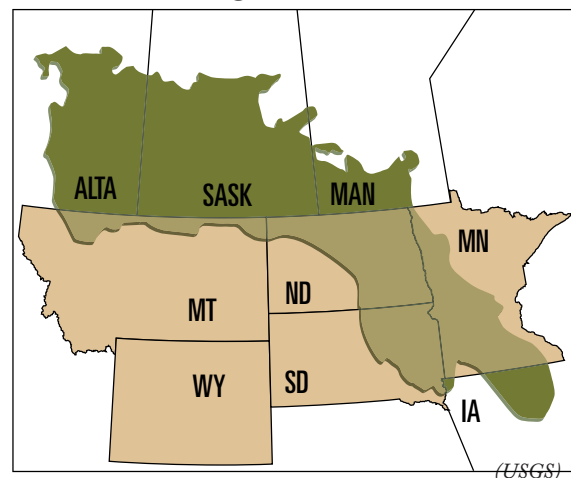
North Dakota wetlands number in the thousands across the state, with densities of more than 150 wetlands per square mile in some areas.<sup>2</sup> This important natural resource offers many benefits to the state, including enhancing water quality, providing water supply, and serving as a natural means of flood and erosion control, as well as providing critical biological benefits. In addition, the habitats provided by the state's wetlands supply significant recreational and commercial benefits that serve to enhance the state's economy and promote a variety of recreational opportunities.

More than 90 percent of the state's wetlands are classified as natural basin wetlands or prairie potholes. These water-holding depressions of glacial origin occur throughout 300,000 square miles of prairie in the north-central United States and south-central Canada<sup>3</sup> and, specifically, in a region of North Dakota north and east of the Missouri River.

According to the U.S. Geological Survey, wetlands once covered 4.9 million acres of North Dakota, or 11 percent of the state. By the late 1980s, significant loss in this acreage was caused by drainage for agricultural development, and the total wetland acres in the state decreased to approximately 2.7 million acres.<sup>4</sup> Currently, it is estimated there are approximately 2.5 million acres of wetlands remaining statewide.<sup>5</sup>

This publication provides an overview of the state's wetlands, focusing on the type of wetland classifications in North Dakota and the various programs designed to create, restore, or enhance wetlands across the state and nation. In addition, the continued threats to wetlands will be discussed, including agriculture, development, and flood control measures, along with the recreational opportunities and economic benefits that remain as a result of these important natural resources.

**Prairie Pothole Region of North America**



## Wetland Classification

The U.S. Fish and Wildlife Service adopted the following definition of wetlands:

*Wetlands are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water.*

The most common types of wetlands found in North Dakota are described below:

### Lacustrine Wetland

Wetlands and deepwater habitats with all of the following characteristics: (1) situated in a topographic depression or a dammed river channel, and (2) lacking trees, shrubs, persistent emergents, emergent mosses, or lichen with greater than 30 percent areal coverage.

### Riverine Wetland

Wetlands and deepwater habitats contained within a channel, with the following exception: wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water or which forms a connecting link between two bodies of standing water.

### Palustrine Wetland

All nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens. These include the vegetated wetlands traditionally called marshes, swamps, bogs, fens, and prairies. It also includes the small, shallow, permanent, or intermittent water bodies often called ponds.<sup>6</sup>

2. North Dakota Game and Fish Department, *Comprehensive Wildlife Conservation Strategy*, December 2005.

3. U.S. Geological Survey, "North Dakota Water Science Center."

4. U.S. Geological Survey, "North Dakota Water Science Center."

5. North Dakota Health Department, *Integrated Section 305(b) Water Quality Assessment Report and Section 303(d) List of Waters Needing Total Maximum Daily Loads*, March 24, 2010.

6. Cowardin et al., "Classification of Wetlands and Deepwater Habitats of the United States."

# The Benefits of Wetlands

## Recreational Opportunities and Economic Benefits


Wetlands provide a wide range of recreational activities, including swimming, canoeing, fishing, hunting, boating, ice skating, and water-skiing. In addition, activities such as hiking, photography, bird watching, and education often focus on wetland areas and species.

By promoting recreational activities, producing resources, and providing other benefits such as pollution control and flood protection, wetlands contribute to national, state, and local economies.<sup>7</sup> Hunting is a popular recreational opportunity provided by the state's wetlands, drawing close to 140,000 people to North Dakota and accounting for 1.6 million days of recreation in the state each year. Hunters in North Dakota collectively spend \$103 million annually and support nearly 3,000 jobs. The total economic impact of hunting in the state is \$278 million.<sup>8</sup>

## Healthy Wildlife Habitats

Wetlands are some of the most biologically diverse environments in the world, hosting an extensive variety of mammals, plants, insects, amphibians, reptiles, birds, and fish dependent on the environment for food, habitat, or shelter. In fact, wetlands are comparable to tropical rain forests or coral reefs in being some of the most biologically productive natural ecosystems in the world. Many animals depend on wetlands for their homes, resting spots, and breeding grounds.<sup>9</sup>

Migratory birds, especially ducks, rely heavily on the wetlands of North Dakota and the Prairie Pothole Region for nesting and feeding habitat. Known as the most productive wetland habitat for waterfowl in North America, the Prairie Pothole Region produces approximately 50 percent of the duck crop in an average year.<sup>10</sup> North Dakota also boasts more national wildlife refuges than any other state in the nation, in large part because of the federal protection of wetlands, which safeguards key habitat for migratory birds.

Endangered or Threatened Species Dependent on Wetlands in North Dakota	
ANIMALS	
Whooping Crane ( <i>Grus americana</i> )	
Black-Footed Ferret ( <i>Mustela nigripes</i> )	
Piping Plover ( <i>Charadrius melodus</i> )	
Pallid Sturgeon ( <i>Scaphirhynchus albus</i> )	
Interior Least Tern ( <i>Sterna antillarum</i> )	
Gray Wolf ( <i>Canis lupus</i> )	<b>Piping Plover</b>
PLANTS	
Western Prairie Fringed Orchid ( <i>Platanthera praeclara</i> )	

Source: "Listing and Occurances for North Dakota," Species Report, U.S. Fish and Wildlife Service, accessed January 18, 2012, [http://ecos.fws.gov/tess\\_public/pub/stateListingAndOccurrenceIndividual.jsp?state=ND&s8fid=112761032792&s8fid=112762573902](http://ecos.fws.gov/tess_public/pub/stateListingAndOccurrenceIndividual.jsp?state=ND&s8fid=112761032792&s8fid=112762573902).

## Water Quality, Storage, and Flood Control

A wetland acts as a natural tub or sponge as water drains into an area, helping to slow water's movement and erosion potential, reduce flood heights, and allow for the storage of groundwater. In addition, wetland soils and plants act as natural filtration systems in treating storm water pollutants and filtering excess nutrients out of rainwater before pollutants reach rivers, streams, and lakes.

Wetlands help control floodwaters by storing excess water during heavy precipitation, with an acre of wetlands storing one to one-and-a-half million gallons of floodwater. When wetlands are filled or altered, their ability to store floodwaters is crippled.<sup>11</sup>

7. Environmental Protection Agency, *Economic Benefits of Wetlands*.  
8. Hunting Works for North Dakota, "Economic Data."  
9. Environmental Protection Agency, *Functions and Values of Wetlands*.  
10. U.S. Geological Survey, "North Dakota Water Science Center."  
11. Environmental Protection Agency, *Economic Benefits of Wetlands*.

# The Threats to Wetlands

## Agriculture

The conversion of wetlands to cropland contributes to the loss of wetlands in North Dakota. As commodity prices rise, some landowners drain wetlands to bring more land into production. Technological advancements in farming have also contributed to the decline of wetland acreage, and growing agriculture production has increased the use of pesticides, fertilizers, and other chemicals which can contaminate wetlands.<sup>12</sup> As of 2007, 69.4 percent of the state's total farmland (27,527,180 acres) is classified as cropland.<sup>13</sup>

## Urbanization

North Dakota's population grew by 4.7 percent from 2000 to 2010<sup>14</sup>, with many individuals migrating to expanding urban areas of the state. This urbanization also threatens wetlands with the continued development of commercial, industrial, and residential areas.

## Flood Control Measures

With the state experiencing unprecedented flooding in recent years, flood control measures are also threatening wetlands, and particularly those regions most impacted by recent flooding: the Red River, James River, Sheyenne River, Missouri River, and Mouse River Basins.

According to the North Dakota Game and Fish Department, Riverine wetlands in these areas are threatened by the continued development of plans to prevent flooding, including the installation of drainage tiles, construction of damming systems in tributaries, building of diversions and bypasses, and practices of bank stabilizations, channel dredging, and filling.

Both the Palustrine and Riverine wetlands in the Red River Basin are threatened due to flood prevention measures underway and because of the continued installation of drainage tiles in the area's wetlands as a means of flood prevention. It is estimated this practice threatens tens of thousands of wetlands acres in this region.<sup>15</sup>



12. Steve Dyke, North Dakota Game and Fish Department, telephone interview, January 25, 2012.

13. U.S. Department of Agriculture, Economic Research Service, "State Fact Sheet: North Dakota."

14. U.S. Census Bureau, State & County QuickFacts, "North Dakota."

15. Steve Dyke, North Dakota Game and Fish Department, telephone interview, January 25, 2012.



# Wetland Protection and Management

Wetland protection and management are important to the preservation and restoration of these valuable habitats in North Dakota. But these efforts would not be possible without the cooperation of federal, state, and local governments, private organizations, and individuals in recognizing the need for wetland protection and management and developing the programs to preserve these important natural resources.

According to the U.S. Fish and Wildlife Services’ *National Wetlands Priority Conservation Plan*, priority consideration for the acquisition of wetlands on the federal level will be given to:

- 1) Wetland types that are rare or have declined within an ecoregion;
- 2) Wetland sites subject to identifiable threat of loss or degradation; and
- 3) Wetland sites with diverse and important functions and values.<sup>16</sup>

## North Dakota Acquisition Priorities for Wetlands

- (1) Riverine Wetlands  
*Threatened in the Red, James, Sheyenne, Missouri, and Mouse River Basins*
- (2) Palustrine Wetlands  
*Threatened in the Red River Basin*

*Source: North Dakota Game and Fish Department*

## Wetland Protection Programs

There are many wetland protection programs available in North Dakota, providing opportunity for landowners and conservation-minded organizations, groups, and individuals to protect and enhance these valuable resources.

Below is an example of the accomplishments for a specific program that supports protection of the state’s wetlands:

Wetland Protection Accomplishments in North Dakota 1990-2010	
PROJECT TYPE	ACRES
Fee acquired	5,571
Easement acquired	30,699
Lease acquired (10 years or less)	38,095
Restoration	8,074
Creation	7,498
Enhancement	37,583

*Source: North Dakota Natural Resources Trust, North American Wetlands Conservation Act (NAWCA) grant and match projects, 1990-2010.*



16. U.S. Department of Interior, U.S. Fish and Wildlife Services, *National Wetlands Priority Conservation Plan*, June 1991.

The following is a listing of the agencies and organizations offering wetland protection programs in North Dakota:

**U.S. Fish and Wildlife Service**

- National Wildlife Refuges
  - ~ North Dakota Wildlife Refuges
  - ~ Wetland Management District
  - ~ Waterfowl Production Areas
- Partners for Fish and Wildlife Program
- Wetland Easement Program
- Grassland Easement Program
- North American Wetlands Conservation Act

**U.S. Department of Agriculture**

- Selected Farm Bill Programs
  - ~ Environmental Quality Incentives Program
  - ~ Wetland Reserve Program
  - ~ Wildlife Habitat Incentives Program
  - ~ Grassland Reserve Program
  - ~ Conservation Stewardship Program
  - ~ Conservation Reserve Program
- Natural Resources Conservation Service
  - ~ Wetland Reserve Program

**U.S. Army Corps of Engineers**

- Clean Water Act,  
Section 404 Regulatory Program

**Delta Waterfowl**

- Adopt-A-Pothole Program

**Ducks Unlimited**

**The Nature Conservancy**

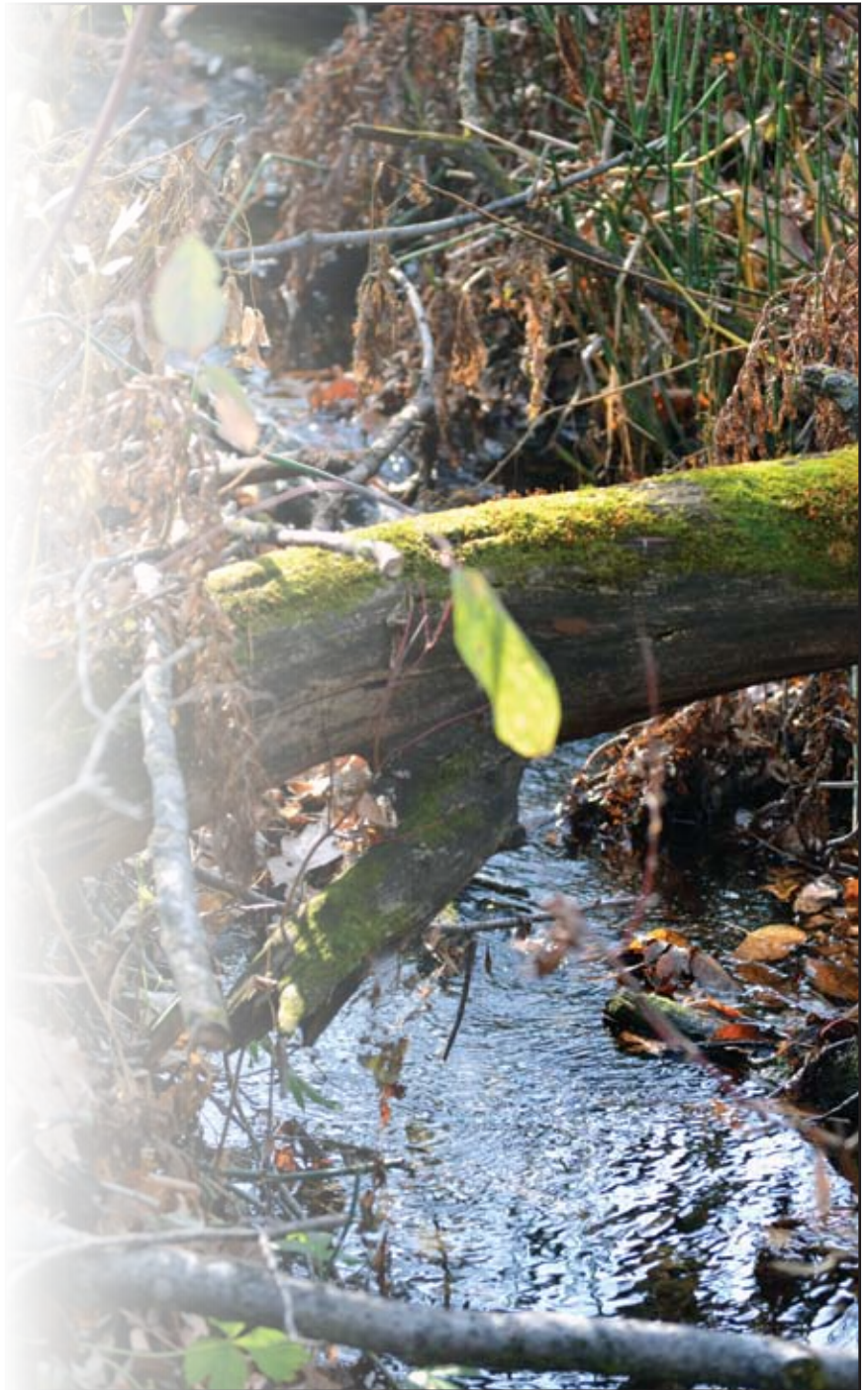
**North Dakota Department of Agriculture**

- Waterbank Program

**North Dakota Game and Fish Department**

- Private Land Initiative Programs

**North Dakota Natural Resource Trust**



*Wetlands are an important natural resource in North Dakota, offering a variety of recreational, biological, and economic benefits. Through a growing focus on numerous wetland protection programs, North Dakota will continue its efforts to alleviate threats to the wetlands that remain of vital importance to the future of the state.*



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